

Explaining Operational Sampling Lead Levels

What are Magellan's lead monitoring requirements?

Magellan's approval to export sealed shipments of lead carbonate through Fremantle is subject to the implementation conditions set out in Statement 783 published on 2 February 2009 by the Minister for Environment. Condition 9-1 of Statement 783 requires implementation of a Health, Hygiene and Environmental Monitoring Program (Program). One of the key requirements is that lead monitoring results during transport operations must not exceed the baseline levels along the 1250 kilometre long road and rail corridor from the company's mine site near Wiluna to the Fremantle Port.

The approved Program to verify compliance with this condition has been designed to determine whether Magellan lead has entered the environment. The transport corridor has been used to transport a range of materials over many years. Those materials would have included many materials which would have contained lead including lead in petrol and lead based paints. Therefore, prior to commencing transport of Magellan lead, Magellan Metals carried out systematic sampling along the transport route from Wiluna to Fremantle to determine the existing levels of lead in the environment.

The pre-commencement sampling program established baseline lead trigger levels, which, if they are exceeded (once transport commences), trigger contingency measures as required under Statement 783. The monitoring undertaken includes soil, water, air, static dust deposition and benthic sediment monitoring at Fremantle Port.

Sampling program

Baseline sampling and derivation of 'trigger' levels is described under the Baseline Sampling section of this website. The trigger levels with which operational sampling (that is, samples taken after commencement of lead carbonate transport) results are compared in the tables in the Operational Sampling section are those established during baseline sampling.

Sample sites

Sampling locations for operational monitoring are:

- 21 dust sampling sites along the rail corridor
- 2 air quality sampling sites at Fremantle Port
- 19 rainwater tank sites along the rail corridor
- 251 soil sites along the road and rail corridor
- 15 drainage sumps at Fremantle Port
- 20 marine sediment sites at Fremantle Port.

For sampling frequency, see the Health, Hygiene and Environmental Monitoring Program.

Trigger levels have been established at each site for each parameter monitored. In addition, air quality monitoring is being undertaken inside independently and randomly selected containers during the sealed shipments.

Drainage Sump Sampling

Site Number	AGD84 Easting	AGD84 Northing	Lead Results (ppm) Trigger Level	Mar-10
SUMPTRS01	381369	6454362	30	27
SUMPTRS02	381356	6454306	42	30
SUMPTRS03 (A)	381345	6454291	37	20
SUMPTRS03 (B)	381345	6454291	100	90
SUMPTRS04 (A)	381334	6454278	46	40
SUMPTRS04 (B)	381334	6454278	102	102#
SUMPTRS05	381329	6454255	35	18
SUMPTRS06	381346	6454300	331	152
SUMPTRS07	381356	6454322	128	111
SUMPTRS08	381326	6454251	164	60
SUMPTRS09	380965	6453790	128	93
SUMPTRS10	380967	6453805	234	218
SUMPTRS11	380973	6453823	96	73
SUMPTRS12	380682	6453285	262	157
SUMPTRS13	380671	6453286	165	38

This sample was isotopically analysed and has been determined not to be Magellan Metals' lead. The lead reading then becomes Magellan Metals' revised trigger level for the monitoring location.